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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/684,076	10/08/2000	Jonathan Cheneff	0544MH-36339	2872

7590 03/09/2005

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EXAMINER
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STIMPAK, JOHNNA

ART UNIT	PAPER NUMBER
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3623

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/684,076

Applicant(s)

CHERNEFF ET AL.

Examiner

Johnna R Stimpak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 December 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,8-11,13-17,21-24,26-31,36-39 and 41-45 is/are rejected.
- 7) ☒ Claim(s) 2,4-7,12,18-20,25,32-35 and 40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Arguments***

1. In view of the Appeal Brief filed on December 13, 2004, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1, 3, 8-11, 13-17, 21-24, 26-31, 36-39, and 41-45** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lilly et al, US 5,787,000, in view of Dietrich, US 5,548,518.

As per **claim 1**, Lilly et al teaches receiving a list of a plurality of products to be developed (column 3, lines 31-54 – data in received including work order information, defined as a request to manufacture one or more distinct parts); receiving a list of required completion

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dates, each completion date specifying the completion date for the development of a corresponding product in the plurality of products (column 3, lines 4-15 – work order information specifies a want date for the work order; lines 26-29 – each operation is assigned a finish date/time); receiving, for each product in the plurality of products, a project definition of a project for developing the product, each project definition defining: a plurality of tasks required to complete a project for developing the product associated with the project definition (column 3, lines 14-17 – the operations information includes the identity and sequence of operations to be performed for the work order); and a list of resources required to complete each task defined in the product definition, receiving a list of available resources, each resource in the list of available resources having a capacity as a function of time (column 3, lines 14-17 – operations information includes resources needed; column 7, lines 8-14 – the resources used in the manufacturing process are defined as a function of the dates and times in a calendar); and automatically generating a development schedule comprising all tasks for all projects, the development schedule allocating the resources (abstract and column 3, lines 1-47 – a scheduling system for scheduling work orders and resources needed to perform each operation in the work orders).

Lilly et al teaches scheduling a plurality of work orders while including material availability for each material used in the manufacturing process but does not explicitly teach receiving a list of materials available from outside parties distinct from the enterprise and a schedule of availability of the materials available from the outside parties; and the development schedule also scheduling tasks that require materials from outside parties at a time when such materials will be available.

Dietrich teaches a scheduling system wherein an external material availability schedule is used to determine if the material available will meet requirements in scheduling product development (column 3, lines 8-11; column 4, lines 40-45 – material from an external source is used to meet requirements in the product development). Since both Lilly et al and Dietrich teach a scheduling system wherein products are developed according to the availability of materials and resources, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Dietrich's external availability schedule for materials into Lilly et al's scheduling system to account for all materials available to generate a specific product thereby increasing the efficiency of the scheduling system.

As per **claim 8**, Lilly et al teaches a particular task comprises a plurality of subtasks, a task definition for the particular task specifying the plurality of subtasks and an order in which the plurality of subtasks should be performed (column 6, lines 25-50 – the sequence of operations may be single or multiple level; a multiple level work order has a branched sequence of operations whereby each branch contains a subset of operations for manufacturing an intermediate product or subassembly that is used to manufacture the final product).

As per **claim 9**, Lilly et al teaches the plurality of tasks are defined in a hierarchy specifying relationships among related tasks, at least one task comprising a plurality of sub-tasks, each leaf tasks being associated with an identification of one or more resources for performing the leaf task (column 6, lines 25-50 – the sequence of operations may be single or multiple level; a multiple level work order has a branched sequence of operations whereby each branch contains a subset of operations for manufacturing an intermediate product or subassembly that is used to manufacture the final product, these subsets of operations include material requirements).).

As per **claim 10**, Lilly et al teaches a particular task in the plurality of tasks comprises a standard task for repeated use, the method further comprising storing a task definition for the particular task comprising a list of sub-tasks for performing the particular task and a list of resources for performing the sub-tasks in the list of sub-tasks (column 3, lines 1-30 – the computer system stores operations information for each work order to be scheduled including the identity and sequence of operations to be performed for the work order and the identity of the resources needed).

As per **claim 11**, Lilly et al does not explicitly teach monitoring the materials identified in the list of materials from outside parties distinct from the enterprise using one or more supply chain tools operable to monitor the outside parties; and if one or more materials are determined to be unavailable using the one or more supply chain tools, automatically modifying the development schedule based on information obtained by the one or more supply chain tools. Dietrich teaches monitoring the material availability and if there is not sufficient material available, then the available resource will be allocated to the higher priority product and the schedule is changed (column 4, lines 40-45). Since both Lilly et al and Dietrich teach a scheduling system wherein products are developed according to the availability of resources, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Dietrich's external availability schedule for materials into Lilly et al's scheduling system to account for all resources available to generate a specific product thereby increasing the efficiency of the scheduling system.

As per **claim 13**, Lilly et al teaches the list of available resources is defined in a hierarchy specifying relationships among related resources, at least one resource comprising a plurality of

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sub-resources (column 6, lines 25-50 – the sequence of operations may be single or multiple level; a multiple level work order has a branched sequence of operations whereby each branch contains a subset of operations for manufacturing an intermediate product or subassembly that is used to manufacture the final product).

As per **claim 14**, Lilly et al teaches receiving project status information from a user, the project status information regarding the status of a project in the plurality of projects; and automatically modifying the development schedule based on the project status information (column 9, line 58 – column 10, line 8 – if it is determined that one or more operations in a sequence are delayed, the system reschedules the operations to achieve an optimum schedule).

As per **claim 15**, Lilly et al teaches receiving resource status information from a user, the resource status information regarding the status of available resources in the list of available resources; and automatically modifying the development schedule based on the resource status information (column 9, line 58 – column 10, line 8 – if it is determined that one or more operations in a sequence are delayed by the unavailability of resource capacity, the system reschedules the operations to achieve an optimum schedule).

As per **claim 16**, Lilly et al teaches the resource status information comprises a change in the capacity of a resource (column 9, line 58 – column 10, line 8 – if it is determined that one or more operations in a sequence are delayed by the unavailability of resource capacity, the system reschedules the operations to achieve an optimum schedule).

As per **claim 17**, Lilly et al does not explicitly teach automatically generating the development schedule using a genetic algorithm. However, it is old and well known to use genetic algorithms to solve scheduling problems since genetic algorithms are useful in

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maximizing or minimizing an objective function within a set of constraints, thereby increasing the efficiency of the scheduling system.

**Claims 3, 21-24 and 26-30** teach the system for performing the method of claims 1, 8-11 and 13-17.

**Claims 31, 36-39, and 41-45** teach the software embodied in a computer-readable medium that is executed to perform the method of claims 1, 8-11 and 13-17.

***Allowable Subject Matter***

4. **Claims 2, 4-7, 12, 18-20, 25, 32-35, and 40** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: The cited prior art taken alone or in combination fails to teach the claimed invention set forth in claims 2, 4-7, 12, 18-20, 25, 32-35 and 40. Specifically, the invention set forth in these claims is directed to a method of scheduling development planning wherein available resources are assigned an ability level and each task requiring a resource specifies an minimum ability level of one or more resources to be used for that task and the development schedule allocates to all tasks resources that have an ability level at least as high as the specified minimum ability level. This in combination with the features of the independent claims is not taught in the closest prior art, the combination of Lilly et al, US 5,787,000, and Dietrich, US 5,548,518. The combination of Lilly et al and Dietrich teaches scheduling development for a plurality of work orders wherein the work orders have specified completion dates, as well as, each work order has a plurality of



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tasks required to complete the work order which include a list of resources having a capacity as a function of time and a list of materials provided by an outside party included a schedule of availability of the materials available from the outside parties. The combination fails to teach the required resources having an ability level and each task specifying a minimum ability level of one or more resources to be used for that task and the development schedule allocates to all tasks resources that have an ability level at least as high as the specified minimum ability level.

### *Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ladd, US 5,864,480 – Computer-implemented electronic product development.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johnna R Stimpak whose telephone number is 703-305-4566. The examiner can normally be reached on M-F 8am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 703-305-9643. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JS  
3/7/05

  
TARIQ R. HAFIZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600

## Stimpak, Johnna

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**From:** Hafiz, Tariq  
**Sent:** Friday, March 04, 2005 12:40 PM  
**To:** Stimpak, Johnna  
**Subject:** FW: Quick Search for Application 09,684,076

Johnna, I asked Scott to do a quick search for your application. This is what he came up with. Please let me know if this is in the right direction. If you need more help, please stop by. Thanks.

-----Original Message-----

**From:** Jarrett, Scott L.  
**Sent:** Friday, March 04, 2005 12:33 PM  
**To:** Hafiz, Tariq  
**Subject:** Quick Search for Application 09,684,076

Good afternoon Tariq per your request I conducted a quick search for application no. 09,684,076.

There are a couple of interesting US Patents/Patent Publications for multiple projects (5548506), product description linked to project plan (US 4875162), skills to resource matching, etc.. Here is the EAST search string (please note some of the dates are later than the effective filing date of the application).

(US-20020169647-\$ or US-20050004825-\$ or US-20040002885-\$ or US-20030061330-\$ or US-20020128895-\$).did. or (US-5530861-\$ or US-5548506-\$ or US-5671361-\$ or US-6308164-\$ or US-RE38633-\$ or US-6275812-\$ or US-6101481-\$ or US-6044355-\$ or US-5913201-\$ or US-5765140-\$ or US-5303170-\$ or US-5164897-\$ or US-4937743-\$ or US-4875162-\$ or US-5111391-\$ or US-5826252-\$).did.

NPL

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Steven C. Wheelwright, Kim B. Clark, Creating Project Plans to Focus Product Development  
Mar 1, 1992, Harvard Business Review Article

The long-term competitiveness of most manufacturers depends on their product development capabilities. Yet most companies' development process is unruly and unfocused, with a collection of projects that do not match business objectives and consume far more development resources than are available. An "aggregate project plan" can help managers to focus on a set of projects, rather than individual ones. A central element of the plan is the project map, which categorizes projects into five types: breakthrough, platform, derivative, R&D, and partnerships. With the plan, managers can improve resource allocation, project sequencing, and critical development capabilities.

<http://harvardbusinessonline.hbsp.harvard.edu/relay.jhtml?name=itemdetail&id=4899>

Tim Pyron, Special Edition Using Microsoft® Project 2000  
Chapter 18. Working with Multiple Projects

<http://proquest.safaribooksonline.com/0789722534/ch18>

Fergus O'Connell, How To Run Successful Projects III: The Silver Bullet

<http://proquest.safaribooksonline.com/0201748061>

Part 3: RUNNING MULTIPLE PROJECTS SIMULTANEOUSLY

<http://proquest.safaribooksonline.com/0201748061/part03>

Richard Murch, Project Management: Best Practices for IT Professionals

<http://proquest.safaribooksonline.com/0130219142>

Steven C. Wheelwright, REVOLUTIONIZING PRODUCT DEVELOPMENT : QUANTUM LEAPS IN SPEED, EFFICIENCY, AND QUALITY

Chp 4. Aggregate Project Plan

<http://www.amazon.com/exec/obidos/ASIN/0029055156/103-3991152-1004612>

Please let me know if you need a more detailed analysis/search.